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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,708	01/22/2004	Takayuki Nishimura	6453P033	7652

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER

CASCHERA, ANTONIO A

ART UNIT	PAPER NUMBER
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2676

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/763,708

Applicant(s)

NISHIMURA ET AL.

Examiner

Antonio A. Caschera

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-11, 14, 15, 17-24 and 26-34 is/are rejected.
- 7) ☒ Claim(s) 3, 12, 13, 16 and 25 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/23/04 & 07/19/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in the pending application.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5, 7, 9-11, 18, 20, 22-24, 26, 28 and 30-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In reference to claims 5 and 18, claims 5 and 18 recite the limitation "the first formula" in lines 3-4 of page 86 (claim 5, for example) of the claims. There is insufficient antecedent basis for this limitation in the claim.

In reference to claims 7 and 20, claims 7 and 20 contain the variables, "(a)" and "(d)", which are nowhere defined in the claims and therefore do not signify any specific value or are indefinite.

In reference to claims 9 and 22, claims 9 and 22 contain the variables, "(0)", "D", "M" and "MAX", which are nowhere defined in the claims and therefore do not signify any specific value or are indefinite.

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In reference to claims 31 and 32, claims 31 and 32 recite the limitation of rounding up or down when a certain situation is tested against the values 5 and 6 however it is unclear what this situation is. Claims 31 and 32 are indefinite in that they fail to particularly point out what value/expression/variable etc is compared to the values of 5 and 6 in order to decide on which rounding (up or down) to perform.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 14, 27, 29, 33 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Yi (U.S. Patent 6,778,187 B1).

In reference to claims 1, 14, 33 and 38, Yi discloses devices and methods for compressing color pixel data, storing it in memory, retrieving the data and uncompressing the compressed color pixel data from memory (see column 2, lines 11-18 and 25-32). Yi discloses performing the uncompressing upon already reduced bit length data, in particular, 8-bit red color component reduced to 5-bits, 8-bit green color component reduced to 5-bits and 8-bit blue color component reduced to 4-bits (see column 2, lines 63-67). Yi also discloses performing such compressing and uncompressing of color data using left and right shifting operations upon the bit

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data (see column 2, lines 11-13 and 27-28), which the Office interprets functionally equivalent to the “integer operation” of the claims, as the “integer” element being the number of bit places to shift the data by. Further note, the Office interprets the first unit system having the lower resolution level equivalent to the compressed form of the RGB data in Yi and the second unit system having the higher resolution level equivalent to the uncompressed form of RGB data in Yi. Also, the “first and second unit systems” of Applicant’s claims are seen functionally equivalent to the RGB14 (R=5 bits, G=5 bits, B=4 bits) and RGB24 (R=8 bits, G= 8 bits, B=8 bits) respectively. Further in reference to claims 33 and 34, since Yi also discloses the device performing the above color data transformations as a microprocessor (see column 4, lines 34-38) and the device comprising RAM and DRAM elements (see column 4, lines 42-47), the Office interprets Yi to inherently disclose an executable program/code and medium for storing the program/code.

In reference to claim 27, Yi discloses all of the claim limitations as applied to claim 1 above in addition, since Yi discloses bit shifting (see above) to compress and decompress color data, the Office interprets that Yi inherently discloses conducting reversible conversion of data using powers of 2.

In reference to claim 29, Yi discloses all of the claim limitations as applied to claim 27 above. Yi discloses performing compression and uncompression operations upon color data using left and right shifting operations upon the bit data (see column 2, lines 11-13 and 27-28).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 4, 6, 8, 15, 17, 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yi (U.S. Patent 6,778,187 B1) in view of Meyers et al. (U.S. Patent 6,486,889 B1).

In reference to claims 2, 4, 6, 8, 15, 17, 19 and 21, Yi discloses all of the claim limitations as applied to claims 1 and 14 respectively above. Although Yi discloses first and second unit systems being of different format (RGB14 and RGB24, see above), Yi does not explicitly disclose using two separate color spaces to define the first and second unit systems. Meyers et al discloses methods and apparatus for color space transforming RGB video into Lab, Ycbcr and/or Srgb color spaces (see column 1, lines 8-9 and 33-42). Note, the RGB video of Meyers et al. is seen as an analog signal since Meyers et al. discloses possible sources of the RGB video to be CRT monitors and televisions (see column 1, lines 11-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the color space transformation techniques together with the compression/decompression techniques of Yi in order to create a more flexible invention by allowing it to handle image information that had not been initially formatted to be compatible with other devices (see column 1, lines 44-48 of Meyers et al.). Further, the “third data” of Applicant’s claims would be the combined data formed by the union of techniques described by Yi and Meyers et al., specifically, the color

transformed RGB14 data which would be color transformed into Lab, Ycbr and/or Srgb color spaces.

Allowable Subject Matter

5. Claims 3, 12, 13, 16 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In reference to claims 3 and 16, the prior art of record (Yi (U.S. Patent 6,778,187 B1) and Meyers et al. (U.S. Patent 6,486,889 B1)) does not explicitly disclose the RGB to Ycbr and Ycbr to RGB conversion techniques as claimed in the specific formulas of claims 3 and 16.

In reference to claims 12 and 25, the prior art of record (Yi (U.S. Patent 6,778,187 B1) and Meyers et al. (U.S. Patent 6,486,889 B1)) does not explicitly disclose implementing the first unit system as a "BNU" unit system converting to a 1/100mm second unit system, in combination with the further limitations of claims 12 and 25 respectively.

In reference to claim 13, the prior art of record (Yi (U.S. Patent 6,778,187 B1) and Meyers et al. (U.S. Patent 6,486,889 B1)) does not explicitly disclose the conversion of first BNU unit system to 1/100 mm unit system using the specific formulas as claimed.

References Cited

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

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- a. Poynton, Charles, "Frequently Asked Questions about Color." March 1997.
<http://www.poynton.com/Poynton-color.html>. (Date accessed 09/23/2005).
 - Poynton discloses color conversion techniques including specific formulas and conversion coefficient values for transforming RGB to Ycbr and vice-versa.
- b. Keith (U.S. Patent 5,519,439)
 - Keith discloses subsampling color video to a certain format to be previewed while transmitting a compressed signal to a remote location.
- c. Lucas et al. (U.S. 5,664,080)
 - Lucas et al. discloses a system and method for generating a universal palette and for mapping the color space for an original image into the universal palette for compression.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (571) 272-7781. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:30 AM and 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (571) 272-7778.

Any response to this action should be mailed to:

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Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

571-273-8300 (Central Fax)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

aac

9/24/05

A handwritten signature in black ink, appearing to read "Matthew C. Bella".

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600